Groundwater flooding in the urban areas is a process which leads to complex changes in the environment conditions as a result of rising groundwater levels under impact of a set of various causes and factors. Locally such set determines degree of groundwater flooding hazard related to some objects (area or facility), and vulnerability of the objects under impact. Assessment of groundwater flooding risk in urban areas might be based on the method of expert and analytical evaluations during researching spatial distribution of local hazards and vulnerabilities indexes. Developed indexes of the hazard impact are dependent on the values of numerically expressed changes in groundwater levels and qualities, and in soils properties. Vulnerability indexes are dependable of urban development characteristics (such as building's density, number of storey, development age and assignment, basements types). All that indexes would be analyzed on the thematic maps layers and used for zoning groundwater flooding risks by the scale: low, moderate, medium, high, and critical risk. That methodology had been applied in zoning groundwater flooding risks and developing the thematic maps album representing six large cities in Ukraine: Dnipropetrovsk, Kherson, Kharkiv, Odessa, Poltava, Zaporizhya.